was used to estimate the cost of treating T2DM patients to two composite endpoints in a UK setting, using 208 week data from a previously published double-blind randomised clinical trial of dapagliflozin (DAPA) vs glipizide (GLIP) (NCT00660907). Calculation of costs included drug acquisition costs, cost for adverse events, micro- and macrovascular complications, and BMI related costs The cost of treating one patient to the composite endpoints using DAPA+MET versus GLIP+MET over 208 weeks was calculated as total cost per treatment arm divided by number of patients that reached the composite endpoint in each arm. **RESULTS:** The number needed to treat was 4 for DAPA+MET and 35 for GLIP+MET and overall cost of treating one patient over 208 weeks to composite endpoint (1) was £12,042 for DAPA+MET and £50,040 for GLIP+MET. The corresponding figures for composite endpoint (2) was 4 for DAPA+MET and 47 for GLIP+MET with corresponding costs of £12,666 and £59,366. **CONCLUSIONS:** The cost of treating one patient to the composite endpoints was approximately 4.1-4.7 times higher with GLIP+MET compared to DAPA+MET. These results demonstrate that when multiple treatment goals, including weight loss and reduction of hypoglycaemic events are targeted, the cost of treating patients with DAPA+MET is lower compared to GLIP+MET.

PDB44

RELATIONSHIP BETWEEN SPENDING ON DIABETES DRUGS AND OCCURRENCE OF RISKS ASSOCIATED WITH TYPE 2 DIABETES IN ENGLISH GENERAL PRACTICES

Spain VA, Murphy EM, Beaumont A

Cogora, London, UK

OBJECTIVES: To correlate spending on diabetes drug prescriptions in English general practices with occurrence of risks associated with type 2 diabetes. **METHODS:** Data from the HSCIC showing number of prescriptions, by drug, issued in English general practices in 2014 and the associated net ingredient cost (NIC) were analysed using a proprietary in-house software. The total number of patients per CCG with diagnosed diabetes, stroke and ischemia, peripheral atrial disease, hypertension, heart failure, coronary heart disease and atrial fibrillation between April 2013 and March 2014 were identified through the HSCIC's QOF data. The median age in a CCG was identified using ONS 2012 data. Spearman's correlations and partial correlations were performed using SPSS v22.0. 'Spend' was defined as total NIC. **RESULTS:** As expected, spending on prescriptions for diabetes drugs correlated almost perfectly with the number of diabetes patients ($r=0.97^{***}$). All the included risks associated with diabetes, bar age, correlated significantly with spending on diabetes prescriptions. The highest correlation was with the number of patients with obesity ($r=0.92^{***}$). The most expensive type of diabetes drugs were insulins. The correlations between spend on insulin prescriptions and number of patients with each individual diabetes risk was always higher than the correlations between spend on prescriptions for all diabetes drugs and number of patients with each individual associated risk. The same was true when correlating the total number of prescriptions with occurrence of diabetes associated risks. Interestingly, both of these trends remained true when controlling for number of patients diagnosed with diabetes using partial correlations. **CONCLUSIONS:** As the occurrence of risks associated with diabetes increase, the spend on diabetes prescriptions is likely to increase. This is not only because more prescriptions are issued but also because the likelihood of insulins, the most expensive type of diabetes drugs, being prescribed increases.

PDB45

COST OF MEDICATION NONADHERENCE IN PATIENTS WITH DIABETES MELLITUS

Nadendla R

Chalapathi Institute of Pharamaceutical Sciences, Guntur, India

OBJECTIVES: To examine the longitudinal effects and key costs of medication non adherence in patients with diabetes mellitus. **METHODS:** The prospective study was conducted over a period of six months in a South Indian Village. Adherence to treatment has been assessed during a personal interview with each patient by using questionnaire. Medication adherence was assessed by using Morisky medication adherence scale (MMAS). **RESULTS:** A total of 658 patients were diagnosed with Type 2 diabetes mellitus among them 87% (n=572) of the patients were prescribed with oral hypoglycemic agents for more than a year were selected as study population. The statistical significant association with socio demographic and adherence rate to antidiabetic therapy indicated that higher prevalence of adherence among uneducated (41.22%) elderly (32.82%) women (42.26%) unemployed (29.95%). The most common causes for nonadherence to taking medications were lack of knowledge (35.25%) unaffordability () experience of untoward reactions (15.62%). Feeling better (26.5%). The adherence levels were 35 %(poor adherence), 27% (medium), and 38% (high). Among the poor adherence, 24 patients were hospitalized due to diabetic complications like, diabetic foot ulcer (n=13), diabetic ketoacidosis (07), diabetic nephropathy (01), diabetic retinopathy (03). 5 patients were admitted due to diabetes induced renal failure. **CONCLUSIONS:** In conclusion, our study revealed that poor adherence leads hospitalization and increases the economic burden of diabetic patient. By conducting diabetes awareness camps and continued medication education programme through diabetic centers in village setup can significantly reduces the non adherences.

PDB46

DIRECT COST AND MEDICATION USAGE IN ELDERLY TYPE 2 DIABETIC PATIENTS UNDER HOSPITALIZATION AMONG INSURED URBAN POPULATION IN CHINA

Liu Q[1], Liu M[1], Zhang J[2], Chu Y[3], Li Z[3], WANG D[3]

[1]*Beijing Brainpower Pharma Consulting Co. Ltd, Beijing, China,* [2]*China Health Insurance Research Association, Beijing, China,* [3]*Boehringer Ingelheim (China) Investment Co., Ltd., Beijing, China*

OBJECTIVES: Elderly population is growing and so is the prevalence of diabetes among them. The present study was to explore direct medical cost and medication usage pattern in hospitalized elderly patients with type 2 diabetes (T2D) among insured urban population in China. **METHODS:** A pooled cross-sectional analysis was performed using China Health Insurance Research Association Database of year 2010, 2011 and 2012. Hospitalizations with T2D were identified using ICD-10 codes. Adult patients without any cancer or ketoacidosis were included. Descriptive statistics were used to analyze hospitalization costs and medication usage in T2D patients by age group cut at 60. **RESULTS:** A total of 11,157 T2D hospitalization records from 13 cities were analyzed, with 56.77% are elderly patients, and 32% of total patients have at least one comorbidity. The mean length of stay (LOS) per admission was 16 days in elderly patients, and 14 days in patients under 60. The average direct cost per hospitalization and reimbursement ratio in elderly patients were ¥9,036.74 (±7675.74) and 77.34%, compared to ¥8084.34 (±5304.76) and 72.11% in patients under 60, respectively. On average, LOS was found 1 day longer, and hospitalization costs were found ¥1120 higher in T2D patients with comorbidities compared to those without. The average number of medications used per admission was 13 and 11 in patients ≧ 60 and under 60, respectively. In T2D elderly patients, majority (68.92%) used combination of oral antidiabetic drugs (OAD) and insulin. Acarbose and metformin were the most 2 frequently used OAD in all treatment choices. For non-antidiabetic medications, the most two frequently used drugs were aspirin and mecobalamine. **CONCLUSIONS:** Direct medical cost is considerable in elderly T2D patients under hospitalization, especially in those with comorbidities. The study also showed a complex medication usage pattern in elderly population.

PDB47

DIRECT COST AND MEDICATION USAGE AMONG INSURED TYPE 2 DIABETES PATIENTS WITH CHRONIC KIDNEY DISEASE UNDER HOSPITALIZATION IN BEIJING AND TIANJIN, CHINA

Liu Q[1], Liu M[1], Zhang J[2], Chu Y[3], Li Z[3], WANG D[3]

[1]*Beijing Brainpower Pharma Consulting Co. Ltd, Beijing, China,* [2]*China Health Insurance Research Association, Beijing, China,* [3]*Boehringer Ingelheim (China) Investment Co., Ltd., Beijing, China*

OBJECTIVES: Chronic Kidney Disease (CKD) is a common comorbidity of Type 2 Diabetes (T2D). This study is to explore the direct cost and medication usage pattern in T2D with CKD inpatients among insured urban population in Beijing and Tianjin, China. **METHODS:** A pooled cross-sectional analysis was performed using hospitalization records in Beijing and Tianjin from China Health Insurance Research Association Database of year 2010, 2011 and 2012. Hospitalizations with T2D and CKD were identified using ICD-10 codes. Adult patients without any cancer or ketoacidosis were included. Descriptive statistics were used to analyze hospitalization costs and medication usage. **RESULTS:** A total of 810 T2D with CKD hospitalizations were identified, accounting for 20.1% of the total T2D hospitalizations. The mean age (±SD) showed on the records were 62.42 (±11.78) years, with 16.15±8.92 days length of stay. The direct cost per admission was 10,155.68 (±7,614.79), with 77.5% reimbursed by basic medical insurance. Medication cost accounted for 47.55% of the total cost, among which 29.57% were antidiabetics. Averaged 15+ drugs were prescribed per admission. For T2D treatment choices, 13.33% patients used oral antidiabetic drugs (OAD) alone, and 66.75% used OAD and insulin combination. Acarbose and metformin were the two most frequently used OADs in all treatment choices. For non-T2D related medication treatment in T2D with CKD patients, aspirin and nifedipine were the two most frequently used drugs. Drugs on renin-angiotensin system (RAS) were the 5thfrequently used non-antidiabetics. **CONCLUSIONS:** Managing T2D among patients with CKD could be challenging given the renal impairment. This study showed that the direct cost in T2D patients with CKD per hospitalization was considerable and their medicine usage pattern was complex in Beijing and Tianjin in China. More attention should be paid to the rational use of medication in such population.

PDB48

ASSOCIATION BETWEEN WEIGHT CHANGE, DIABETES-RELATED HEALTHCARE COSTS, AND HBA1C AMONG PATIENTS WITH TYPE 2 DIABETES

Mukherjee J[1], Sternhufvud C[2], Smith N[3], Bell K[4], Stott-Miller M[5], Johnston S[6]

[1]*Bristol Myers Squibb, Wallingford, CT, USA,* [2]*AstraZeneca, Mölndal, Sweden,* [3]*Bristol Myers Squibb, Lawrenceville, NJ, USA,* [4]*AstraZeneca, Fort Washington, PA, USA,* [5]*Truven Health Analytics, Cambridge, MA, USA,* [6]*Truven Health Analytics, Bethesda, MD, USA*

OBJECTIVES: To quantify the association between weight change, diabetes-related healthcare costs, and HbA1c among patients with type 2 diabetes (T2D); analyses were also conducted in sub-group of obese patients with no prior cardiovascular disease. **METHODS:** This retrospective, observational cohort study used U.S. insurance claims linked to laboratory and electronic medical records. Study included patients with T2D who were age≥18 years and added/switched to a non-metformin antidiabetes medication after metformin monotherapy between Jan-1-2007-Jun-30-2012 (add/switch date=index). Primary predictor was percentage weight change (PWC) between weight measurement at index and follow-up measurement 6 months thereafter ranging from negative (loss) to positive (gain). Outcomes, measured in 12-month period beginning at follow-up weight measurement, included HbA1c<7 and diabetes-related healthcare costs. Multivariable models quantified the association between PWC (linear effect) and study outcomes. **RESULTS:** Primary analysis included 1,520 patients (mean age 55 years; 47% female); sub-group analysis included 780 patients (mean age 53 years; 51% female). Mean (SD) index weight and PWC were 224.6 (52.8) lbs and +0.2% (4.7%) in primary analysis; 241.3 (47.3) lbs and -0.2% (4.6%) in sub-group analysis. Negative PWC values were significantly associated with higher adjusted probabilities of achieving HbA1c<7 (primary analysis: 58.8 % for PWC of -5% vs. 46.7% for PWC of +5%, P<0.001; sub-group 63.2% for PWC -5% vs. 41.7% for PWC .5%, P<0.001). Increasing PWC was significantly associated with increasing diabetes-specific pharmacy costs (P<0.001) in primary analysis sample and with increasing all-cause pharmacy costs (P=0.018), diabetes-specific total costs (P=0.039), diabetes-specific medical costs (P=0.002), and diabetes-specific pharmacy costs (P<0.001) in sub-group sample. PWC was not significantly associated with all-cause total